App. No.:   10/015,225   AUS920010796US1
Filing Date: 12/13/2001

IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A method of conserving power consumption in a multi-processor data processing system, comprising:

monitoring a workload of the system;

distributing the workload asymmetrically to the processors in the system;

determining a number of processors required to process the monitored workload at a predetermined performance criterion;

activating or deactivating processors to conform the number of active processors in the system to the determined number of processors; and

processing the workload with the active processors while maintaining the deactivated processors in a reduced power state,- wherein deactivating a processor includes selecting a processor for deactivation based on the processor's workload.

2. (original) The method of claim 1, wherein determining the number of processors required comprises determining the minimum number of processors required to achieve the performance criterion.

3. (canceled)

4. (currently amended) The method of claim 1, wherein deactivating a processor includes migrating processes running pending on a processor selected for deactivation to another processor.

5. (original) The method of claim 4, wherein deactivating a processor further includes flushing the processor's cache memory before deactivating the processor.

Page 3 of 11

App. No.: 10/015,225   AUS920010796US1
Filing Date: 12/13/2001

6. (original) The method of claim 1, wherein deactivating a processor comprises transitioning a processor to the lowest power state supported by the processor.

7. (original) The method of claim 1, wherein monitoring the workload comprises determining the demand for CPU cycles.

8. (original) The method of claim 7, wherein monitoring the workload includes determining the instantaneous workload periodically and averaging the instantaneous workload data to obtain an average workload.

9. (currently amended) A data processing system including processor, memory, and I/O means, the system including a sequence of processor executable instructions for conserving power, the instructions being stored on a computer readable medium, comprising:

      computer code means for monitoring a workload of the system;

      computer code means for distributing the workload asymmetrically to the processors in the system;

      computer code means for determining a number of processors required to process the monitored workload at a predetermined performance criterion;

      computer code means for activating or deactivating processors to conform the number of active processors in the system to the determined number of processors; and

      computer code means for processing the workload with the active processors while maintaining the deactivated processors in a reduced power state, wherein the code means for deactivating a processor includes code means for selecting a processor for deactivation based on the processor's workload.

10. (original) The system of claim 9, wherein the code means for determining the number of processors required comprises code means for determining the minimum number of processors required to achieve the performance criterion.

11. (canceled)

Page 4 of 11

12. (currently amended) The system of claim 9, wherein the code means for deactivating a processor includes code means for migrating processes running ~~pending~~ on a processor selected for deactivation to another processor.

13. (original) The system of claim 12, wherein the code means for deactivating a processor further includes code means for flushing the processor's cache memory before deactivating the processor.

14. (original) The system of claim 9, wherein the code means for deactivating a processor comprises code means for transitioning a processor to the lowest power state supported by the processor.

15. (original) The system of claim 9, wherein the code means for monitoring the workload comprises code means for determining the demand for CPU cycles.

16. (original) The system of claim 15, wherein the code means for monitoring the workload includes code means for determining the instantaneous workload periodically and averaging the instantaneous workload data to obtain an average workload.

17. (currently amended) A computer program product comprising a sequence of processor executable instructions for conserving power, the instructions being stored on a computer readable medium, comprising:

    computer code means for monitoring a workload of the system;

    <u>computer code means for distributing the workload asymmetrically to the processors in the system;</u>

    computer code means for determining a number of processors required to process the monitored workload at a predetermined performance criterion;

    computer code means for activating or deactivating processors to conform the number of active processors in the system to the determined number of processors; and

computer code means for processing the workload with the active processors while maintaining the deactivated processors in a reduced power state, wherein the code means for deactivating a processor includes code means for selecting a processor for deactivation based on the processor's workload.

18. (original) The computer program product of claim 17, wherein the code means for determining the number of processors required comprises code means for determining the minimum number of processors required to achieve the performance criterion.

19. (canceled)

20. (currently amended) The computer program product of claim 17, wherein the code means for deactivating a processor includes code means for migrating processes running pending on a processor selected for deactivation to another processor.

21. (original) The computer program product of claim 20, wherein the code means for deactivating a processor further includes code means for flushing the processor's cache memory before deactivating the processor.

22. (original) The computer program product of claim 17, wherein the code means for deactivating a processor comprises code means for transitioning a processor to the lowest power state supported by the processor.

23. (original) The computer program product of claim 17, wherein the code means for monitoring the workload comprises code means for determining the demand for CPU cycles.

24. (original) The computer program product of claim 23, wherein the code means for monitoring the workload includes code means for determining the instantaneous workload periodically and averaging the instantaneous workload data to obtain an average workload.

App. No.: 10/015,225
Filing Date: 12/13/2001

AUS920010796US1

25. (new) The method of claim 1, wherein the monitoring of the workload of the system includes:

triggering the workload monitoring responsive to an asynchronous event selected from among asynchronous events including one or more of the following: initiation of a new process, termination of an executing process, and availability of transaction buffers on the system.

26. (new) The data processing system of claim 9, wherein the computer code means for monitoring the workload of the system includes:

computer code means for triggering the workload monitoring responsive to an asynchronous event selected from among asynchronous events including one or more of the following: initiation of a new process, termination of an executing process, and availability of transaction buffers on the system.

27. (new) The computer program product of claim 17, wherein the computer code means for monitoring the workload of the system includes:

computer code means for triggering the workload monitoring responsive to an asynchronous event selected from among asynchronous events including one or more of the following: initiation of a new process, termination of an executing process, and availability of transaction buffers on the system.